

CLAIMS:

1. A method of correcting shifts in position and attitude of an object which is held by a holding member and to which fiducial mark 1 and fiducial mark 2 are applied, said method comprising the steps of:

5 obtaining a position data of the fiducial mark 1 by image-processing the fiducial mark 1;

rotating the holding member holding the object to be held substantially by 180 degrees in a horizontal plane;

10 obtaining a position data of the fiducial mark 2 by image-processing the fiducial mark 2 rotated by 180 degrees; and

15 operating, on the basis of the position data of the fiducial mark 1 and the fiducial mark 2 rotated by 180 degrees, an amount of position shift from a rotational center of the holding member to a center of the object to be held and an amount of angle shift of the object in a horizontal plane with respect to a fiducial line of the holding member.

2. The method of correcting shifts in position and attitude of an object according to claim 1, wherein the object to be held is a head of a 20 DNA micro-array preparing apparatus for arranging a number of spots on a substrate.

25 3. A program for correcting, by using a computer, shifts in position and attitude of an object which is held by a holding member and to which fiducial mark 1 and fiducial mark 2 are applied, said program comprising: a sequence for obtaining a position data of the fiducial mark 1

a sequence for rotating the holding member holding the object to be held substantially by 180 degrees in a horizontal plane;

a sequence for obtaining a position data of the fiducial mark 2 rotated by 180 degrees; and

5 a sequence for executing an operation, on the basis of the position data of the fiducial mark 1 and the fiducial mark 2 rotated by 180 degrees, for calculating an amount of position shift from a rotational center of the holding member to a center of the object to be held and calculating an amount of angle shift of the object in a horizontal plane with respect to a
10 fiducial line of the holding member.

4. An apparatus for correcting shifts in position and attitude of an object which is held by a holding member and to which fiducial mark 1 and fiducial mark 2 are applied, said apparatus comprising:

15 an imaging device for imaging the fiducial mark 1 and fiducial mark 2;

an image-processing device for processing image information imaged by the imaging device to thereby obtain a position data;

20 a rotating mechanism for rotating the holding member holding the object to be held substantially by 180 degrees in a horizontal plane; and

25 an operation unit for operating, on the basis of the position data of the fiducial mark 1 and the fiducial mark 2 rotated by 180 degrees, an amount of position shift from a rotational center of the holding member to a center of the object to be held and an amount of angle shift of the object in a horizontal plane with respect to a fiducial line of the holding member.